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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,714	04/27/2001	Eun-Hwa Hong	030681-297	7444

7590

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EXAMINER

LISH, PETER J

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-12

# Office Action Summary

Application No.

09/842,714

Applicant(s)

HONG ET AL.

Examiner

Peter J Lish

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15, 25 and 27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11 is/are allowed.
- 6) ☒ Claim(s) 12-15, 25 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Applicant's arguments with respect to claims 1-11 have been fully considered and are persuasive. The rejection of claims 1-11 has been withdrawn.

Applicant's arguments with respect to claims 12-15 have been fully considered but they are not persuasive. Applicant argues that Tennent teaches only the use of infrared radiation because examples do not specifically show the use of other types of electromagnetic radiation. While the claimed means of applying electromagnetic radiation and thus independently heating the catalyst material are not shown in the examples of Tennent et al., it cannot be concluded that Tennent et al. teaches away from them. The claimed means are known practices of supplying electromagnetic radiation. They would therefore have been obvious to use in the process of Tennent et al. in order to independently heat the catalyst material.

Regarding the use of the Margrave reference, the applicant is correct in that the reference to Margrave et al. has a filing date of 3/16/01. However, the Margrave reference claims priority from provisional application 60/138,505, filed June 10<sup>th</sup>, 1999, wherein the limitations are found.

Applicant's arguments with respect to claim 25 have been fully considered but they are not persuasive. Regarding claim 25, applicant argues that Tennent teaches only a method comprising the heating of gas as well as the catalyst material. Tennent explicitly teaches that the catalyst material may be "independently heated". Therefore, it is maintained by the examiner that Tennent suggests restricting the heating to the catalyst material.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear as to how the catalyst materials may be in a gaseous state while also being limited to their inclusion on a support structure, as in claim 1.

***Claim Rejections - 35 USC § 102***

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tennent et al.

The rejection of the previous office action, paper #10, is maintained in its entirety and incorporated herein by reference.

Claims 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tennent et al. and further in view of Margrave et al (US 2002/0004028 A1).

The rejection of the previous office action, paper #10, is maintained in its entirety and incorporated herein by reference.

Claim 25 is rejected under 35 U.S.C. 102(b) as being anticipated by Tennent et al. (USPN 5,165,909).

The rejection of the previous office action, paper #10, is maintained in its entirety and incorporated herein by reference.

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***Allowable Subject Matter***

Claims 1-11 are allowed. The following is a statement of reasons for the indication of allowable subject matter: The prior neither teaches nor suggests the use of a catalyst support that is not tolerant of reaction conditions. Specifically, Tennent et al. teaches that the support must remain solid under reaction conditions (column 8,k lines 40-45).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Lish whose telephone number is 703-308-1772. The examiner can normally be reached on 9:00-6:00 Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703-308-3837. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

PL



**STUART L. HENDRICKSON**  
**PRIMARY EXAMINER**